

A NEW SPECIES OF *IDIASTA* (HYMENOPTERA: BRACONIDAE) FROM SPAIN¹

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ABSTRACT: A new species of *Idiasta* is described from Spain, and compared with *I. maritima* and *I. paramaritima*.

The Palearctic and Nearctic faunas of the genus *Idiasta* Foerster, 1862 were reviewed by Königsman (1960) and Wharton (1980) respectively.

Wharton, dealing with the Nearctic Alysini, established what is known as the '*Phaenocarpa* complex', a complex of genera that is mainly characterized by the second flagellomere being longer than the first. The '*Idiasta* group' lies within this complex. It has the most plesiomorphic features of the complex: a) the first transversal-cubital vein usually longer than the second segment of the radius; b) parallel vein entering the central or posterior part of the brachial cell; c) a well-developed post-nervellus; d) ovipositor sheath with short and dense pilosity. Similarly, *Idiasta* is the most primitive genus of this group and conserves the most plesiomorphic features of the mandibles, wing vein pattern and body sculpture. These characteristics are common to other complexes such as the genus *Alysia* Latreille, 1804.

The genus *Idiasta* is extremely difficult to study because of the following: a) the paucity of specimens that have been collected; b) the sexual dimorphism that is fairly pronounced in certain species; c) the lack of biological information (i.e., hosts unknown); d) the lack of studies on intraspecific variation. Docavo *et al.*, 1985 were the first to report two species of this genus from the Iberian fauna: *Idiasta maritima* (Haliday, 1838) and *Idiasta paramaritima* (Königsman, 1960), captured using 250 W light traps. The species described in the present work is similar to these.

Idiasta titaguensis sp. nov.

Female:- Head: Vertex and occiput with abundant pilosity. Head in dorsal view forms a broad rectangle. Temples 2/3 the size of eyes. Occiput fairly concave. Epicranial suture in the form of a smooth groove. Face rugulose and with a small central keel, with sparse, pale hairs; regular in length, very long near the eyes. Clypeus with long hairs. Eyes black, without pilosity. A smooth shiny pit present between the insertion of the antennae and

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vertex. Mandibles yellow-brown, teeth with brown edges. Teeth 1 and 3 not very sharp-pointed, tooth 2 approximately 2.5 times longer than teeth 1 and 3. Labial and maxillary palps brown. Antennae fine, black (without a white subapical ring); scape and pedicel slightly lighter. Second flagellar article longer than the first; flagellum with 26 articles; as long as the body.

Thorax: Scutum bulging in anterior part, convex, with some lateral hairs where the parapsidal sulci are situated. Notaulices crenulated and ending in a elongated dorsal pit which extends to the ante-scutellar furrow. The region surrounding the dorsal pit is smooth and shiny. Prescutellar pit broad and subrectangular with pronounced ridges arranged irregularly. Scutellum saddle-shaped, shiny, smooth, bare, with anterior and posterior edges of the same width and with a slight pattern on its sides, thus being neither rounded nor triangular. Sternauli straight, rugose, broad; anterior groove of mesopleuron crenulate, posterior groove narrow and punctate. Pronotum shiny, exhibiting a broad groove with slight indentations on each side; its posterior part with long, strong crenulae arranged regularly. Metanotum without keel; black and with long hairs and a smooth shiny base on each side. Propodeal spiracles very small. Legs black, shining.

Gaster: Petiole black, broader at apex than at base; two keels arise from its anterior corners and join to form a central keel that later fuses with the longitudinal striations. Spiracles small and situated more or less in center of the tergite. Remaining tergites also black. T8 with a strong incision in apex. T5-7 split. Length of ovipositor $2/3$ length of gaster; ventral valves with 5 teeth each.

Wings: Veins and stigma of forewings dark brown. Forewing otherwise totally transparent and hyaline, with no coloring; only the first three abscissae of radial vein are darker on sides. Pterostigma oval in shape, elongated and well-separated from metacarpus. Radius arising from distal third of pterostigma; length of the first abscissa approximately equal to diameter of stigma and to length of second abscissa; third abscissa straight, not reaching wing apex, five times longer than second abscissa. Recurrent vein interstitial. Cu2 narrowing towards apex. Brachial cell closed. Parallel vein entering brachial cell below the middle of its distal border. Nervulus interstitial. Tegulae brown. Medius-discal vein of the hindwing arising from the middle of median vein.

Length of body without ovipositor: 4 mm.

Wing-span: 8.5 mm.

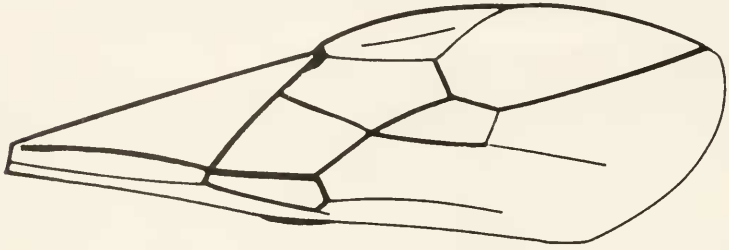
Biometric data:- Head: 1.5 times broader than long; 1.5 times broader than scutum. Face: 2.4 times broader than high. Mandibles: 1.36 times longer than apical width; apex 1.05 times broader than base. First article of flagellum 0.52 times length of second; 0.6 times length of third. Thorax: 1.45 times longer than high; 1.43 times higher than wide. Prescutellar furrow: 2 times broader than long. Wings: stigma about 3.6 times longer than broad. r_2 1.1 times longer than r_1 ; r_3 5 times longer than r_2 . n.rec. 0.62 times length of d_1 . Basal vein 1.2 times longer than cul. Fore wings 2.5 times broader than thorax. Gaster: Petiole 1.1 times longer than apical breadth, its apex 2.1 times broader than base. Ovipositor 1.4 times longer than hind tibiae.

Male: Unknown.

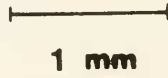
Material examined: Holotype: 1 female, 10-X-1983. Titaguas (Valencia, Spain). This specimen was captured using a 25 W U.V. light.

The holotype is deposited in the Fundación Entomológica "Torres Sala". Passeig de la Petxina, 15. 46008 Valencia (Spain).

This new species differs from *Idiasta maritima* Haliday and *Idiasta paramaritima* Königsmann as follows: (indicated by an # from *Idiasta*

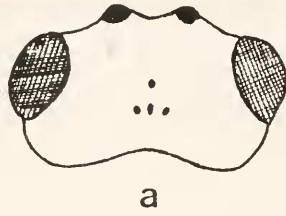


A

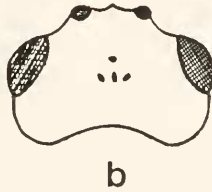


B

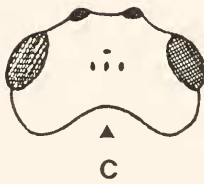
Fig. 1.-A) and B) Fore- and hindwings of *Idiasta titaguensis* nov. sp..



a



b



c

0.25 mm

Fig. 2.- Dorsal view of head of *I. maritima* (a), *I. paramaritima* (b) and *I. titaguensis* sp. nov. (c).

maritima and by an * from *Idiasta paramaritima*).

- * Vertex and occiput with abundant pilosity.
- * Fairly concave occiput (fig. 2).
- # Pilosity of face light colored, scattered, regular in length, longer near the eyes.
- # Shiny, smooth pit between insertion of antennae and vertex.
- # Flagellum of antennae black.
- * Metanotum without keel (keel poorly developed in *I. paramaritima*).
- * Legs shiny black.
- # First three abscissas of radius darker on sides.
- * n. rec. interstitial.
- * First abscissa of radius approximately same length as diameter of pterostigma and of second abscissa of radius.
- * Medial-discoidal vein of posterior wing stemming from center of median vein.

The most important characteristic for recognizing this species probably lies in the vein pattern (fig. 1) since the first abscissa of the radius exhibits a similar length to that of the stigma and of the second abscissa of the radius and in no case resembles the features shown by *Idiasta paramaritima* where this transverse vein is approximately $\frac{1}{2}$ that of the diameter of the stigma and $\frac{1}{2}$ that of the second abscissa. It is even more unlike *Idiasta maritima* where this ratio is even less: $\frac{1}{3}$ and $\frac{1}{4}$.

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LITERATURE CITED

- Docavo, I., R. Jiménez, & J. Tormos. 1985. Aportaciones al conocimiento de los *Alysiini* de España (II). (*Hymenoptera, Braconidae, Alysiinae*). Bolm Soc. port. Ent., (2): 341-349.
- Königsmann, E., 1960. Revision der paläarktischen Arten der gattung *Idiasta*. Beitr. Ent., Berlin, 10: 624-654.
- Wharton, R., 1980. Review of the Nearctic *Alysiini* (Hym., Braconidae), with discussion of generic relationships within the tribe. Univ. Calif. Publ. Ent., 88: 112 pp.